

DP-309738/DP-309739

VACUUM BOOSTER WITH SELF-LOCKING DIAPHRAGM SUPPORT

5

ABSTRACT OF THE DISCLOSURE

A vacuum booster 10 and method utilize a power piston apparatus 14 including a
10 booster power piston 24, a secondary diaphragm support 26, a diaphragm support seal 28,
and a primary diaphragm support 30 having an integral locking collar 32 for engaging an
annular groove 34 in an outer surface 36 of the power piston 34 and clamping radially
inner edges of the primary and secondary diaphragm supports 30, 26, with the diaphragm
support seal 28 therebetween, in the annular groove 34 of the power piston 24. Rolling
15 diaphragms 42, 64 are attached between outer peripheral edges 40, 62 of the primary and
secondary diaphragm supports 30, 26 and a housing 12 of the booster 10.